

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A method of distributing timing information across a packet network, the method comprising:
at a master component, generating timing signal[s] packets containing timing signals at predictable intervals using a clock reference of a given frequency, and broadcasting or multicasting the timing signal[s] packets to a plurality of client components over said packet network, preserving the timing signal packet intervals; and
at each said client component, receiving said timing signal[s] packets and determining the intervals between successive signals packets, applying a clock recovery algorithm to said determined intervals to recover in substantially real time the original clock frequency, and ~~synchronising~~ synchronizing the frequency of a local clock of the client component to the recovered frequency.
2. (Original) A method according to claim 1, the method being used to distribute timing information between various components of a telecommunication system coupled together via a packet network.
3. (Original) A method according to claim 2, wherein said components include one or more components coupled to TDM networks/links.
4. (Original) A method according to claim1, wherein one or more of the components is coupled to a T1 or E1, T3 or E3, SONET or SDH link, performing a data conversion function between the T1 or E1, T3 or E3, SONET or SDH data format and the packet network data format.
5. (Original) A method according to claim 1, the packet network providing a backplane of a telecommunications gateway.

6. (Currently Amended) A method according to claim 1 and comprising including in said packets ~~containing a timing signal~~, a priority marker, and upon recognition of such packets at routers/switches of the packet network, forwarding them with the highest possible priority.

7. (Currently Amended) ~~Apparatus~~ An apparatus for enabling the operating clock frequencies of a plurality of components, coupled to a packet network, to be ~~synthesised~~ synchronized to the clock frequency of a master component also coupled to the packet network, the apparatus comprising:

means at the master component for receiving or generating a clock signal having a clock frequency, and for generating from said clock signal, timing signal[s] packets containing timing signals at predictable intervals;

means at the master component for broadcasting or multicasting the timing signal[s] packets to a plurality of client components over said packet network, preserving the timing signal intervals; and

means at each said client component for receiving said timing signal[s] packets and determining the intervals between successive ~~signals~~ packets, for applying a clock recovery algorithm to said determined intervals to recover in substantially real time the original clock frequency, and for ~~synchronising~~ synchronizing the local clock frequency of the client component to the recovered clock frequency.

8. (Currently Amended) A gateway of a telecommunications network, the gateway comprising:

a plurality of components each operating at a local clock frequency, one of the components, the master component, generating or receiving a reference clock signal having a given frequency; and

a packet network backplane for communicating packet data between said components,

the master component having means for generating from said clock reference a stream of timing signal[s] packets containing timing signals at predictable intervals, and

means for broadcasting or multicasting said timing signal[s] packets, preserving the timing signal packet intervals, to other components operating at said local clock frequencies via said packet network backplane, and the receiving components having means for ~~synchrenising~~ synchronizing their local clock frequencies to said reference clock frequency by ~~analysing~~ analyzing the intervals between received timing signal[s] packets.

9. (Original) A gateway according to claim 8, wherein at least one of said components is a TDM line card, coupled in use to a TDM link.

10. (Original) A gateway according to claim 9, wherein at least one of the components is be a TDM line card coupled to a T1 or E1 link whilst at least one other component is a TDM line card coupled to a T3, E3, SONET or SDH link, the gateway performing up and down conversions for data received and sent via the links.